

CLAIMS

WHAT IS CLAIMED IS:

1. A linear motor elevator system, comprising:
 - at least one linear stator comprised of individually-energized stator sections, said linear stator including a gap;
 - at least one thrust plate oriented adjacent to said stator;
 - an elevator platform attached to said thrust plate; and
 - at least one compensation stator section located adjacent to said gap in said linear stator and in parallel with said linear stator, wherein said thrust plate is longer than said gap.
2. The motor system of Claim 1, wherein said individually-energized stator sections are grouped into replaceable stator modules.
3. The motor system of Claim 1, further comprising:
 - a controller that determines which of said stator sections is to be energized at any instant.
4. The motor system of Claim 1, further comprising:

a second linear stator in parallel with said first linear stator and also being comprised of individually-energized stator sections.

5. The motor system of Claim 4, further comprising:

a second thrust plate connected to said platform and adjacent to said second linear stator.

6. The motor system of Claim 1, further comprising:

a hatch compensation stator oriented in parallel with said linear stator and disposed in said gap.

7. The motor system of Claim 3, further comprising:

a position sensor attached to said platform and in communicative contact with said controller.

8. The motor system of Claim 1, wherein said thrust plate includes permanent magnets.

9. The motor system of Claim 1, wherein said thrust plate includes a slotted iron core and copper or aluminum bars.

10. The motor system of Claim 1, wherein said thrust plate includes a smooth copper or aluminum plate backed by iron.

11. A linear motor drive system for moving large doors, comprising:

at least one linear stator comprised of individually-energized stator sections, said linear stator including a gap;

at least one thrust plate adjacent to said stator, said stator and thrust plate oriented so that an attraction force between the stator and the thrust plate is vertically upward;

a door panel attached on the bottom of said thrust plate; and

at least one compensation stator section located adjacent to said gap in said linear stator and in parallel with said linear stator, wherein said thrust plate is longer than said gap.

12. The motor system of Claim 11, wherein said individually-energized stator sections are grouped into replaceable stator modules.

13. The motor system of Claim 11, further comprising:

a controller that determines which of said stator sections is to be energized at any instant.

14. The motor system of Claim 11, further comprising:

a second linear stator in parallel with said first linear stator and also being comprised of individually-energized stator sections.

15. The motor system of Claim 14, further comprising:

a second thrust plate connected to said door and adjacent to said second linear stator.

16. The motor system of Claim 13, further comprising:

a position sensor attached to said door and in communicative contact with said controller.

17. The motor system of Claim 11, wherein said thrust plate includes permanent magnets.

18. The motor system of Claim 11, wherein said thrust plate includes a slotted iron core and copper or aluminum bars.

19. The motor system of Claim 11, wherein said thrust plate includes a smooth copper or aluminum plate backed by iron.

20. The motor system of Claim 11, wherein said door has rollers attached on a side of said door opposite said thrust plate.